User Manual

ProfiTrace Plugin

for Profi-S-Bus

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Version (SW and Manual)
V1.0.0 First release

1 Installation

1.1 Requirements

The plug-in runs only with ProfiTrace version 1.6.1 upwards. Please ensure that you have installed at least this version on your PC.

The plug-in is composed of one file called ***plg_S-Bus.dll***

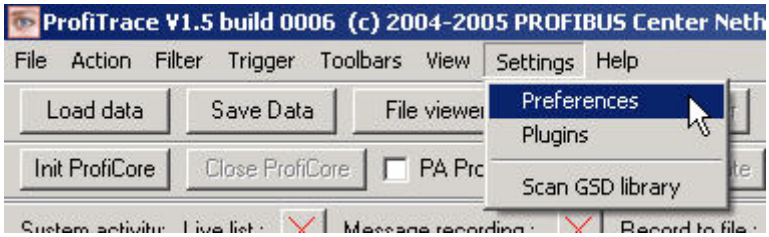
1.2 Installation

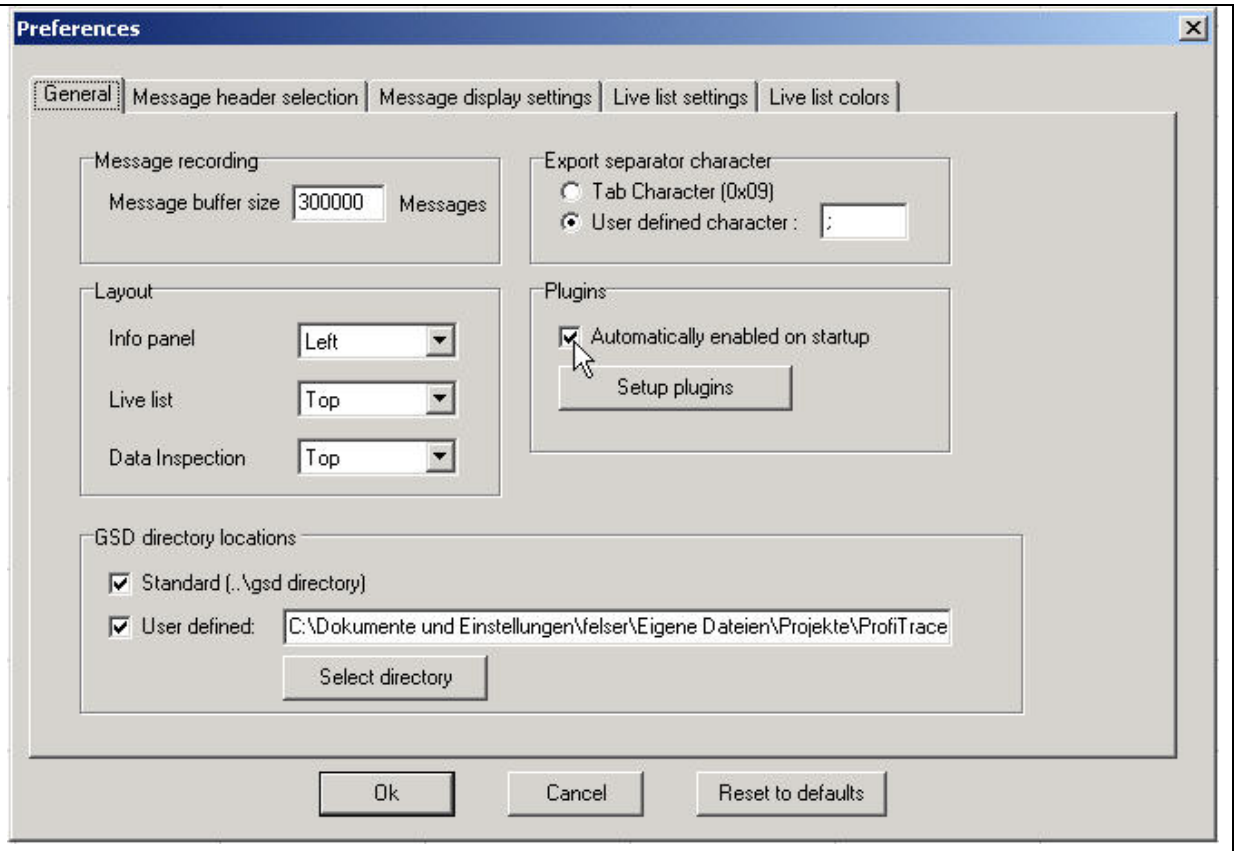
Copy the file ***plg_S-Bus.dll*** in the directory of the ProfiTrace plug-in. This directory is called normally

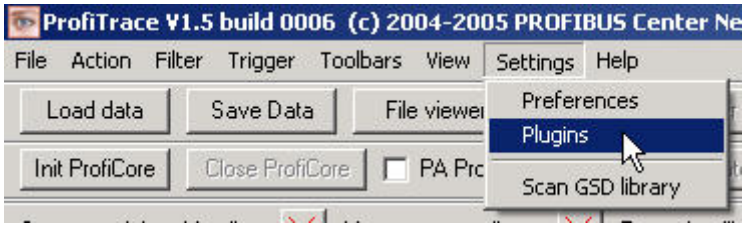
C:\Programme\ProfiTrace_V1_6_1\app\plugins

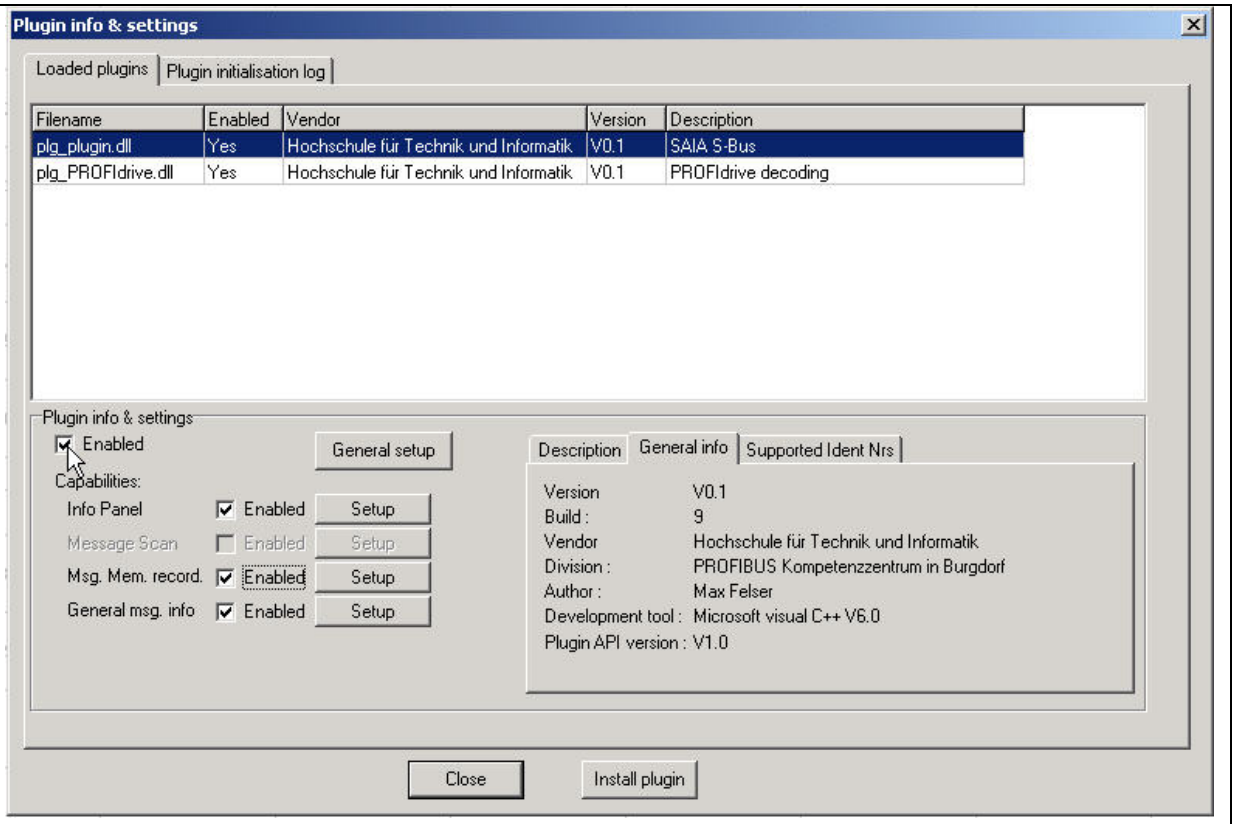
1.3 Setup

Start the ProfiTrace program and setup the plug-in:

1	Open the ***Preferences*** in ProfiTrace 
2	Select the ***Plugins*** to ***Automatically enabled on startup***



3	Restart your ProfiTrace
4	Open the ***Plugins*** menu 
5	Ensure that: - the Plugin is ***Enabled*** - The ***Info Panel*** is enable to get interpretations on the Info Panel - ***Msg. Mem. Record.*** is enabled to get decoding of reply messages - The ***General msg. info*** is enabled to get hints on filtering on the Plugin outputs

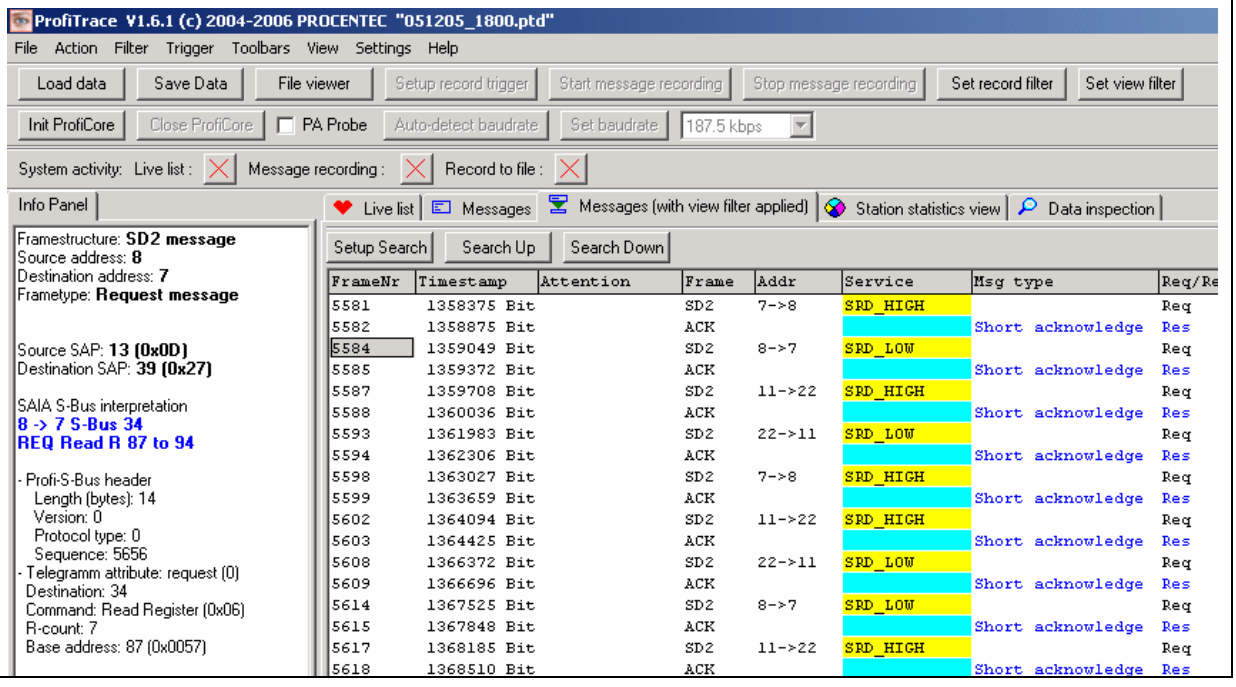


6	No additional setups are possible in this version.

2 Measurements

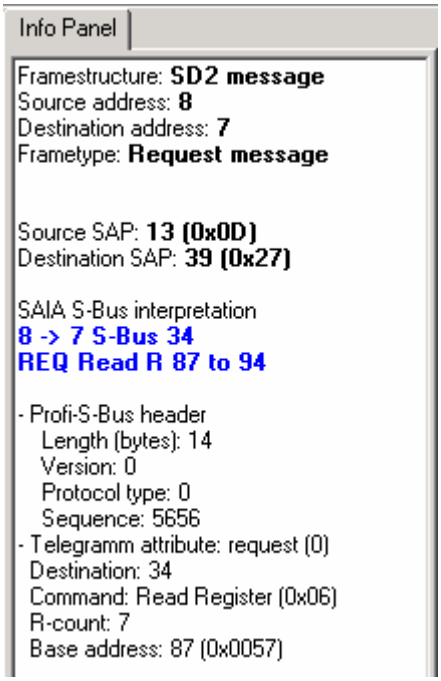
2.1 Start

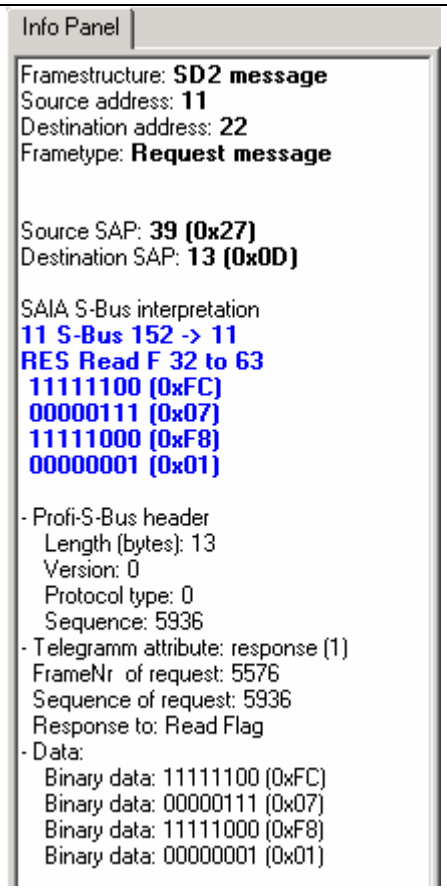
1	Start the measurement as normal


ProfiTrace V1.6.1 (c) 2004-2006 PROCENTEC "051205_1800.ptd"
File Action Filter Trigger Toolbars View Settings Help
Load data
Save Data
File viewer
Setup record trigger
Start message recording
Stop message recording
Set record filter
Set view filter
Init ProfiCore
Close ProfiCore
PA Probe
Auto-detect baudrate
Set baudrate
187.5 kbps
System activity: Live list :
Message recording :
Record to file :
Info Panel
Framestructure: SD2 message
Source address: 8
Destination address: 7
Frametype: Request message
Source SAP: 13 (0x0D)
Destination SAP: 39 (0x27)
SAIA S-Bus interpretation
8 -> 7 S-Bus 34
REQ Read R 87 to 94
- Profi-S-Bus header
Length (bytes): 14
Version: 0
Protocol type: 0
Sequence: 5656
- Telegramm attribute: request (0)
Destination: 34
Command: Read Register (0x06)
R-count: 7
Base address: 87 (0x0057)
Live list
Messages
Messages (with view filter applied)
Station statistics view
Data inspection
Setup Search
Search Up
Search Down
FrameNr Timestamp Attention Frame Addr Service Msg type Req/Re
5581 1358375 Bit SD2 7->8 SRD_HIGH Req
5582 1358875 Bit ACK Short acknowledge Res
5584 1359049 Bit SD2 8->7 SRD_LOW Req
5585 1359372 Bit ACK Short acknowledge Res
5587 1359708 Bit SD2 11->22 SRD_HIGH Req
5588 1360036 Bit ACK Short acknowledge Res
5593 1361983 Bit SD2 22->11 SRD_LOW Req
5594 1362306 Bit ACK Short acknowledge Res
5598 1363027 Bit SD2 7->8 SRD_HIGH Req
5599 1363659 Bit ACK Short acknowledge Res
5602 1364094 Bit SD2 11->22 SRD_HIGH Req
5603 1364425 Bit ACK Short acknowledge Res
5608 1366372 Bit SD2 22->11 SRD_LOW Req
5609 1366696 Bit ACK Short acknowledge Res
5614 1367525 Bit SD2 8->7 SRD_LOW Req
5615 1367848 Bit ACK Short acknowledge Res
5617 1368185 Bit SD2 11->22 SRD_HIGH Req
5618 1368510 Bit ACK Short acknowledge Res

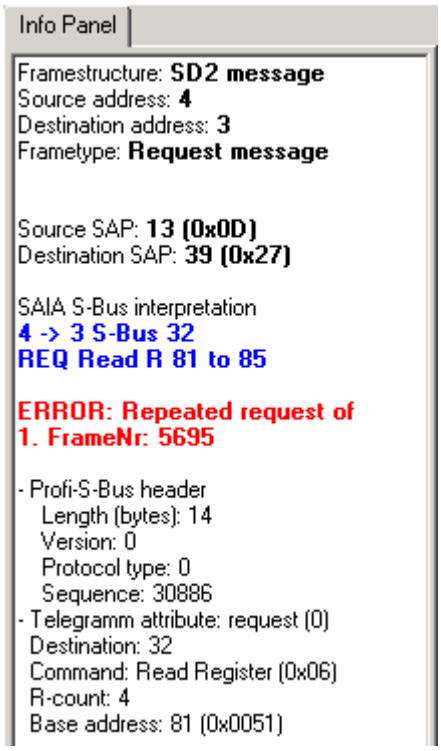
	with: - Init ProfiCore - Start Message Recording - Stop message Recording Or ***Load data*** from a recorded file and select the ***Messages*** display

2.2 Interpretation

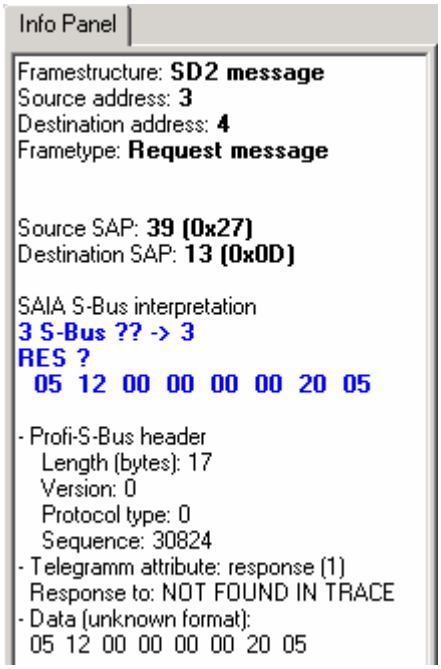
1	The Info Panel shows the SAIA-S-Bus interpretation, if the frame is recognised as such  **Remark:** The frames are interpreted as SAIA-S-Bus frames if the SAPs are <40, the data length is >10 and equal to the fourth data byte (and the first three data bytes are 0).
	Hint: You may use a filter ***(SD=2)AND(LEN=DATA[3])*** to select SAIA-S-Bus frames.
2	If there is a request found with the same sequence number, addresses and SAPs as the reply, the content of the reply is interpreted and displayed.



3 If a frame is repeated the second occurrence of the request or reply is marked with an error indication.

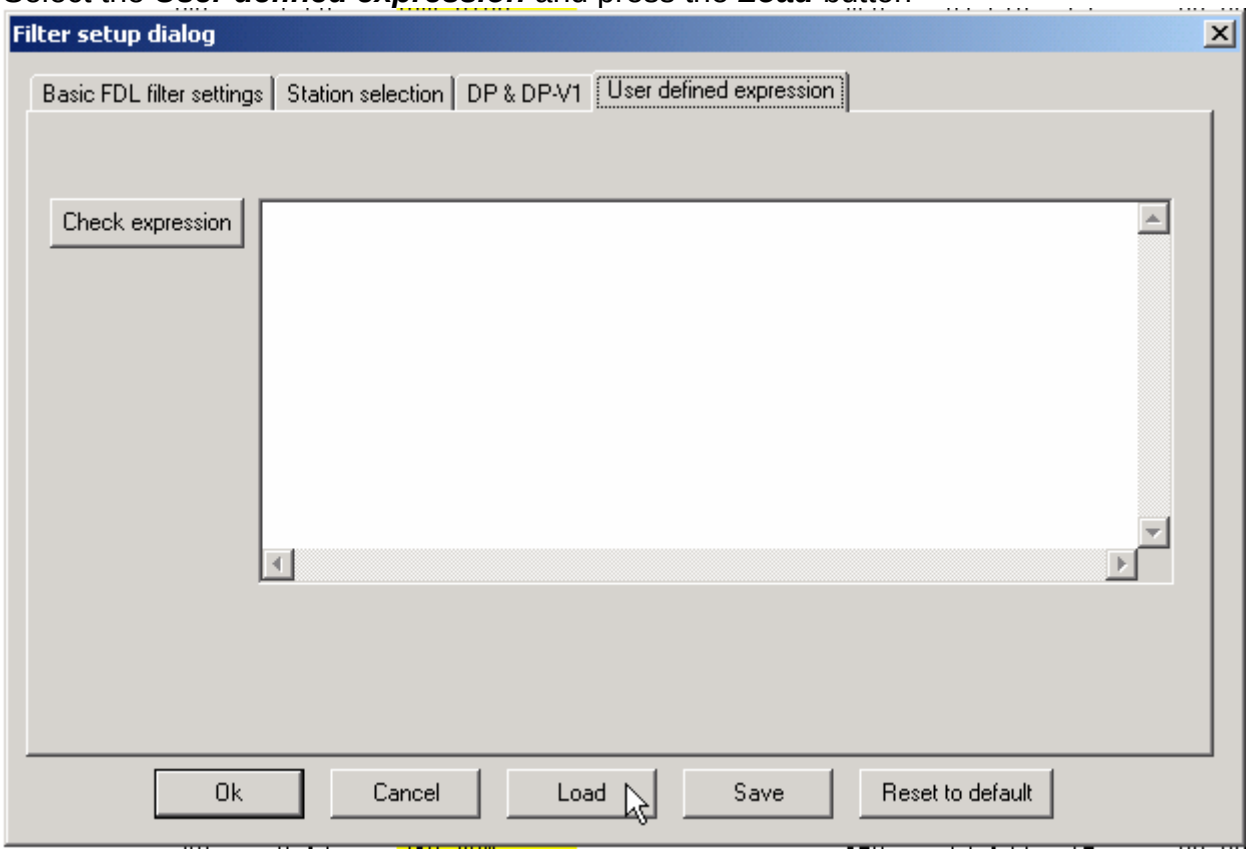
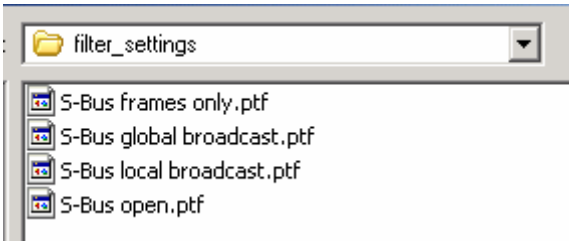


4 If the request for a reply is not found in the list of traced messages (or the message registration is not switched on in the plug-in), there is not possible to get an interpretation of the data content on reply messages. The data is presented in Hex values.

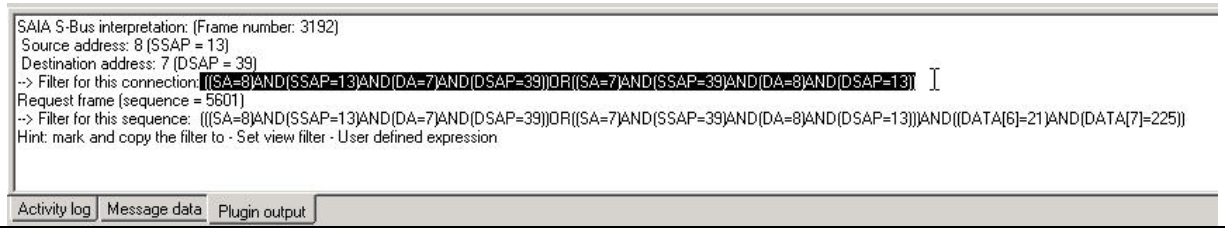
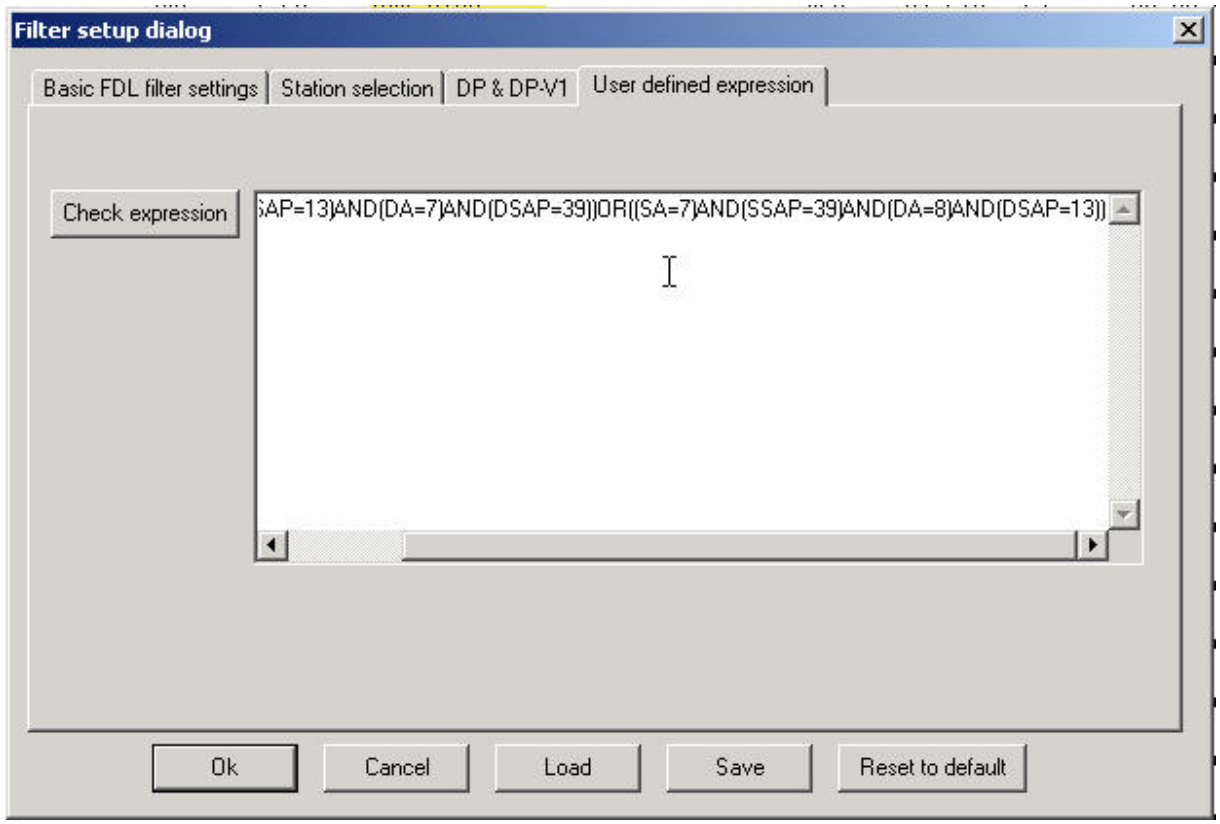


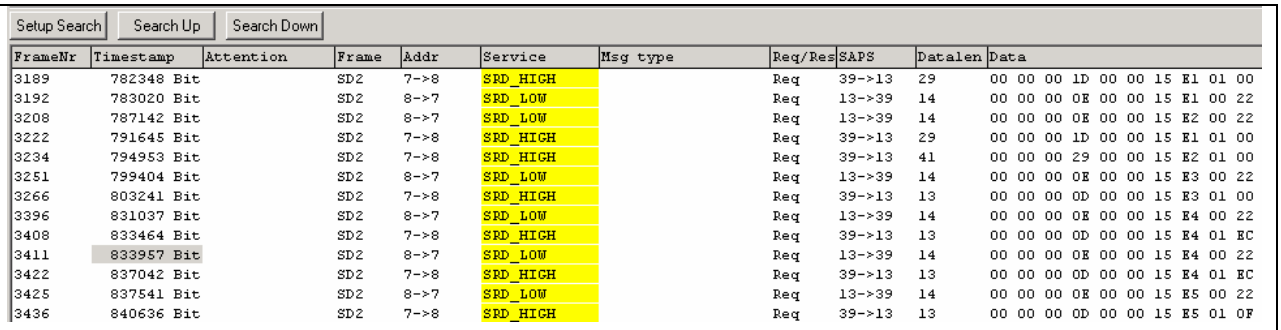
2.3 Predefined Filters

1	With the plug in there is a set of filters for ProfiTrace available. Copy these files into the directory: ***C:\Programme\ProfiTrace_V1_6_1\filter_setting*** and ***C:\Programme\ProfiTrace_V1_6_1\search_setting***
2	If you want to filter your trace on S-Bus frames only open the ***Set view filter*** menu

3	Select the ***User defined expression*** and press the ***Load*** button 
4	Select the required filter: 
5	**Hint:** The same definitions may also be used for the search function in ProfiTrace

2.4 Filter on connections

1	Two filters are proposed on request and reply messages: - filter the connection with this addresses and SAPs - filter all frames of this sequence number (including repetitions) Select the filter description on the Plug-in output window and cut it (e.g. with ctrl-C) 
2	Open the ***Set view filter*** menu
3	and past the filter description in the ***User defined expression*** tab  and terminate with ***Ok***
4	and you see only frames of the selected connection in this trace



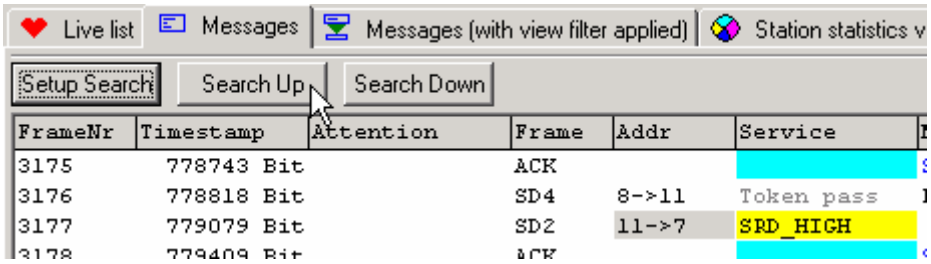
FrameNr	Timestamp	Attention	Frame	Addr	Service	Msg type	Req/Res	SAPS	Datalen	Data
3189	782348 Bit		SD2	7->8	SRD_HIGH		Req	39->13	29	00 00 00 1D 00 00 15 E1 01 00
3192	783020 Bit		SD2	8->7	SRD_LOW		Req	13->39	14	00 00 00 0E 00 00 15 E1 00 22
3208	787142 Bit		SD2	8->7	SRD_LOW		Req	13->39	14	00 00 00 0E 00 00 15 E2 00 22
3222	791645 Bit		SD2	7->8	SRD_HIGH		Req	39->13	29	00 00 00 1D 00 00 15 E1 01 00
3234	794953 Bit		SD2	7->8	SRD_HIGH		Req	39->13	41	00 00 00 29 00 00 15 E2 01 00
3251	799404 Bit		SD2	8->7	SRD_LOW		Req	13->39	14	00 00 00 0E 00 00 15 E3 00 22
3266	803241 Bit		SD2	7->8	SRD_HIGH		Req	39->13	13	00 00 00 0D 00 00 15 E3 01 00
3396	831037 Bit		SD2	8->7	SRD_LOW		Req	13->39	14	00 00 00 0E 00 00 15 E4 00 22
3408	833464 Bit		SD2	7->8	SRD_HIGH		Req	39->13	13	00 00 00 0D 00 00 15 E4 01 EC
3411	833957 Bit		SD2	8->7	SRD_LOW		Req	13->39	14	00 00 00 0E 00 00 15 E4 00 22
3422	837042 Bit		SD2	7->8	SRD_HIGH		Req	39->13	13	00 00 00 0D 00 00 15 E4 01 EC
3425	837541 Bit		SD2	8->7	SRD_LOW		Req	13->39	14	00 00 00 0E 00 00 15 E5 00 22
3436	840636 Bit		SD2	7->8	SRD_HIGH		Req	39->13	13	00 00 00 0D 00 00 15 E5 01 0F

5 You can do the same for a sequence or specify a filter for recording only one connection.

6 You may use the filter expression also to search in the unfiltered data stream for the next frame of the same connection. First ***Setup search***

and paste the filter of the connection into the ***User defined expression***

Search up or ***Search down*** to find the next frame of the same connection in the recorded data.



Hint:
Store the used defined filters or search string in a file. You can retrieve it in the next measurement quick and easy.

3 Limitations

Only the values of registers, timers, counters and binary values of inputs, outputs and flags are interpreted. For all other Profi-S-Bus frames the meaning is indicated but the content is not interpreted.

The trace buffer for requests is limited to 64’000 request frames. This is typically enough for a trace buffer of 300’000 frames. If this limit overflows the request frames are ignored and no interpretation of replies is possible.